

Specification Amendments

(First full paragraph on page 7)

The rasterizer 302 computes texture coordinates (u,v) for each pixel. Texturing unit 306 receives the texture coordinates (u,v) of a pixel from rasterizer 302 over line 308 and retrieves a plurality of texels from the texture memory and interpolates the pixel's texture color (RGB) from the texel values. The term "line" as used herein is intended to refer generally to functional coupling of signals between logical blocks. As such, the term "line" may refer to a single physical signal, or to a plurality of signals such as a bus. Rasterizer 302 receives the pixel's texture color from texturing unit 306 over line 310. The final pixel color (RGB) together with the z-value is stored in frame buffer 312 at address (x,y). Data stored in frame buffer ~~308~~ 312 may be subsequently used by rasterizer 302 for further operations in addition to being converted to analog form for display on a visual display unit (not shown) such as a Cathode Ray Tube (CRT) or Liquid Crystal Display (LCD). A description of two preferred embodiments of texturing unit 306 is provided below in Sections 4 and 5.

(Paragraph starting on page 11 and ending on page 12)

Each of the 64-bit entries in the cache holds two, 24-bit quantities of true-color data ("color a" and "color b" such as shown at 402 in Figure 4) and a 16-bit quantity of decision data. The 16-bit quantity of decision data is written to cache via line 624 from register 608, and the two 24-bit quantities of color data are written to the cache from color look-up table 612. The cache write accesses are controlled by DRAM control unit 607 via line 616. The cache[[d]] is connected to color extract unit 618 via four 64-bit lines. Color extract unit 618 selects data from the four received 64-bit quantities for use by bilinear interpolator 622 in accordance with pixel center coordinates received over line 620 from DRAM control unit 607. A bilinear interpolation is performed on four neighboring texel

B²
colors by the bilinear interpolation unit 622 in accordance with the pixel center coordinates communicated from the DRAM control unit 607 via line 620. The output of the bilinear interpolation unit 622, which ~~consists of~~ comprises a 24-bit quantity of color, RGB data is coupled to rasterizer 302.

(Third full paragraph on page 22)

B³
The pixel center p in the texture map is the intersection point of the diagonals, and we want to find the direction r in which to step from ~~he~~ the pixel center to best approximate the footprint. Ideally, this is given by the main axis a of the ellipse 1302 as shown in Figure 13. However, the computational expenses for finding the ideal direction, as explained below, are too high for real-time operation.
